

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

<b>Test Report ID</b>	<b>MAR01671</b>
Issue Version	1
Customer	Able UK, Able House, Billingham Reach Industrial Estate, Billingham, Teesside, TS23 1PX
Customer Reference	Seaton Port - MMO Analysis
Date Sampled	20-Dec-22
Date Received	22-Dec-22
Date Reported	25-Jan-23
Condition of samples	Cold            Satisfactory

A handwritten signature in black ink, appearing to read 'M. Hubbard'.

Authorised by:            Marya Hubbard  
Position:                 Laboratory Manager

Any additional opinions or interpretations found in this report, are outside the scope of UKAS accreditation.

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Test Report ID        MAR01671  
 Issue Version        1  
 Customer Reference    Seaton Port - MMO Analysis

		Units	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)
		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			45mm	31.5mm	22.4mm	16mm	11.2mm	8mm	5.6mm
<b>Client Reference:</b>	<b>SOCOTEC Ref:</b>	<b>Matrix</b>	<b>-5.5</b>	<b>-5.0</b>	<b>-4.5</b>	<b>-4.0</b>	<b>-3.5</b>	<b>-3.0</b>	<b>-2.5</b>
TB1	MAR01671.001	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TB2	MAR01671.002	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TB3	MAR01671.003	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASP1	MAR01671.004	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.08
ASP2	MAR01671.005	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASP3	MAR01671.006	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASP4	MAR01671.007	Sediment	0.00	0.00	0.00	0.00	0.21	0.07	0.94
ASP5	MAR01671.008	Sediment	0.00	0.00	0.00	0.00	0.00	0.07	0.53
ASP6	MAR01671.009	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SC1	MAR01671.010	Sediment	0.00	0.00	0.00	0.00	0.47	0.65	0.32
SC2	MAR01671.011	Sediment	0.00	0.00	0.00	0.00	0.21	0.00	0.17
SC3	MAR01671.012	Sediment	0.00	0.00	0.00	0.00	0.00	0.10	0.31
SC4	MAR01671.013	Sediment	0.00	0.00	0.00	0.00	0.00	0.25	0.22
SC5	MAR01671.014	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00

\* See Report Notes

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 Customer Reference    Seaton Port - MMO Analysis

		Units	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)
		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			4mm	2.8mm	2mm	1.4mm	1mm	707µm	500µm
Client Reference:	SOCOTEC Ref:	Matrix	-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0
TB1	MAR01671.001	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TB2	MAR01671.002	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TB3	MAR01671.003	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASP1	MAR01671.004	Sediment	0.00	0.06	0.04	0.04	0.04	0.00	0.00
ASP2	MAR01671.005	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASP3	MAR01671.006	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASP4	MAR01671.007	Sediment	0.16	0.04	0.00	0.00	0.01	0.00	0.00
ASP5	MAR01671.008	Sediment	0.00	0.01	0.01	0.00	0.01	0.00	0.00
ASP6	MAR01671.009	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SC1	MAR01671.010	Sediment	0.21	0.09	0.10	0.04	0.04	0.00	0.00
SC2	MAR01671.011	Sediment	0.05	0.03	0.03	0.03	0.02	0.00	0.00
SC3	MAR01671.012	Sediment	0.01	0.05	0.00	0.01	0.02	0.00	0.20
SC4	MAR01671.013	Sediment	0.06	0.04	0.03	0.01	0.01	0.00	0.00
SC5	MAR01671.014	Sediment	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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		Units	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)
		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			353.6µm	250µm	176.8µm	125µm	88.39µm	63µm	44.2µm
Client Reference:	SOCOTEC Ref:	Matrix	1.5	2.0	2.5	3.0	3.5	4.0	4.5
TB1	MAR01671.001	Sediment	0.00	0.00	0.00	0.00	0.04	3.59	7.81
TB2	MAR01671.002	Sediment	0.00	0.00	0.00	0.00	0.19	5.08	8.31
TB3	MAR01671.003	Sediment	0.00	0.00	0.00	0.00	0.56	7.38	8.70
ASP1	MAR01671.004	Sediment	0.00	0.00	0.00	0.00	0.04	3.69	8.23
ASP2	MAR01671.005	Sediment	0.00	0.00	0.00	0.00	0.14	4.43	7.89
ASP3	MAR01671.006	Sediment	0.00	0.00	0.00	0.00	0.43	5.87	8.44
ASP4	MAR01671.007	Sediment	0.03	1.22	4.88	1.40	1.72	8.41	8.94
ASP5	MAR01671.008	Sediment	0.00	0.03	1.74	1.72	0.94	8.19	10.20
ASP6	MAR01671.009	Sediment	0.00	0.00	0.29	1.57	0.24	2.62	10.51
SC1	MAR01671.010	Sediment	1.02	4.26	8.92	14.76	9.89	8.94	8.69
SC2	MAR01671.011	Sediment	1.21	2.99	3.35	6.40	7.08	9.71	10.48
SC3	MAR01671.012	Sediment	2.36	2.21	3.61	4.76	3.01	8.90	11.08
SC4	MAR01671.013	Sediment	0.00	0.04	1.93	2.90	0.30	4.12	9.14
SC5	MAR01671.014	Sediment	0.00	0.15	2.21	4.45	0.64	4.88	11.77

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		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			31.3µm	22.1µm	15.6µm	11µm	7.8µm	5.5µm	3.9µm
Client Reference:	SOCOTEC Ref:	Matrix	5.0	5.5	6.0	6.5	7.0	7.5	8.0
TB1	MAR01671.001	Sediment	7.42	10.13	9.64	9.08	9.73	10.07	8.58
TB2	MAR01671.002	Sediment	8.21	10.84	9.36	8.90	9.69	9.58	7.79
TB3	MAR01671.003	Sediment	8.53	10.72	9.04	8.78	9.55	9.30	7.42
ASP1	MAR01671.004	Sediment	7.56	10.30	9.40	9.30	10.20	10.07	8.18
ASP2	MAR01671.005	Sediment	7.76	10.36	9.36	9.23	10.15	10.19	8.37
ASP3	MAR01671.006	Sediment	8.30	10.18	9.75	9.27	9.58	9.76	8.19
ASP4	MAR01671.007	Sediment	8.60	9.41	8.11	7.32	7.65	7.65	6.27
ASP5	MAR01671.008	Sediment	9.41	10.56	8.29	7.37	7.93	7.85	6.40
ASP6	MAR01671.009	Sediment	8.86	9.53	8.21	8.88	9.76	9.21	7.51
SC1	MAR01671.010	Sediment	6.77	5.74	4.26	4.02	4.36	4.10	3.19
SC2	MAR01671.011	Sediment	8.91	8.10	6.72	5.67	5.74	5.68	4.62
SC3	MAR01671.012	Sediment	9.21	8.56	7.01	6.40	6.88	6.58	5.11
SC4	MAR01671.013	Sediment	8.25	8.72	8.91	8.94	9.77	9.76	7.83
SC5	MAR01671.014	Sediment	10.28	10.04	8.27	7.73	8.17	7.72	6.09

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		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			2.75µm	1.95µm	1.38µm	0.98µm	0.69µm	0.49µm	0.34µm
<b>Client Reference:</b>	<b>SOCOTEC Ref:</b>	<b>Matrix</b>	<b>8.5</b>	<b>9.0</b>	<b>9.5</b>	<b>10.0</b>	<b>10.5</b>	<b>11.0</b>	<b>11.5</b>
TB1	MAR01671.001	Sediment	5.93	3.57	2.43	2.11	2.03	1.94	1.76
TB2	MAR01671.002	Sediment	5.29	3.29	2.38	2.05	1.89	1.75	1.57
TB3	MAR01671.003	Sediment	4.95	2.98	2.06	1.79	1.71	1.61	1.45
ASP1	MAR01671.004	Sediment	5.56	3.41	2.40	2.06	1.93	1.81	1.63
ASP2	MAR01671.005	Sediment	5.65	3.40	2.33	1.97	1.82	1.70	1.54
ASP3	MAR01671.006	Sediment	5.50	3.08	1.91	1.62	1.61	1.58	1.45
ASP4	MAR01671.007	Sediment	4.21	2.52	1.75	1.53	1.45	1.37	1.22
ASP5	MAR01671.008	Sediment	4.37	2.73	1.98	1.75	1.66	1.54	1.38
ASP6	MAR01671.009	Sediment	5.40	3.65	2.78	2.36	2.05	1.76	1.48
SC1	MAR01671.010	Sediment	2.13	1.32	0.97	0.87	0.82	0.76	0.68
SC2	MAR01671.011	Sediment	3.09	1.85	1.31	1.18	1.14	1.07	0.95
SC3	MAR01671.012	Sediment	3.33	1.99	1.40	1.23	1.17	1.10	0.99
SC4	MAR01671.013	Sediment	5.04	2.76	1.74	1.53	1.54	1.51	1.39
SC5	MAR01671.014	Sediment	4.15	2.62	1.89	1.62	1.50	1.40	1.26

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 Issue Version        1  
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		Units	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)	% (at 0.5phi intervals)
		Method No	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01	*SUB_01
		Accreditation	MMO	MMO	MMO	MMO	MMO	MMO	MMO
			0.24µm	0.17µm	0.12µm	0.09µm	0.06µm	0.04µm	<0.04µm
<b>Client Reference:</b>	<b>SOCOTEC Ref:</b>	<b>Matrix</b>	<b>12.0</b>	<b>12.5</b>	<b>13.0</b>	<b>13.5</b>	<b>14.0</b>	<b>14.5</b>	<b>&gt;14.5</b>
TB1	MAR01671.001	Sediment	1.48	1.12	0.82	0.50	0.20	0.02	0.00
TB2	MAR01671.002	Sediment	1.34	1.03	0.76	0.47	0.19	0.02	0.00
TB3	MAR01671.003	Sediment	1.23	0.94	0.69	0.43	0.17	0.02	0.00
ASP1	MAR01671.004	Sediment	1.39	1.07	0.79	0.49	0.20	0.02	0.00
ASP2	MAR01671.005	Sediment	1.31	1.00	0.74	0.46	0.18	0.02	0.00
ASP3	MAR01671.006	Sediment	1.23	0.94	0.69	0.43	0.17	0.02	0.00
ASP4	MAR01671.007	Sediment	1.03	0.78	0.58	0.36	0.14	0.02	0.00
ASP5	MAR01671.008	Sediment	1.16	0.89	0.66	0.41	0.17	0.02	0.00
ASP6	MAR01671.009	Sediment	1.19	0.89	0.65	0.41	0.16	0.02	0.00
SC1	MAR01671.010	Sediment	0.57	0.43	0.32	0.20	0.08	0.01	0.00
SC2	MAR01671.011	Sediment	0.79	0.60	0.44	0.27	0.11	0.01	0.00
SC3	MAR01671.012	Sediment	0.83	0.64	0.48	0.30	0.12	0.01	0.00
SC4	MAR01671.013	Sediment	1.17	0.88	0.64	0.39	0.15	0.02	0.00
SC5	MAR01671.014	Sediment	1.08	0.84	0.63	0.40	0.16	0.02	0.00

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Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference       Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Mercury (Hg)	Nickel (Ni)	Lead (Pb)	Zinc (Zn)
TB1	MAR01671.001	Sediment	26.3	0.22	48.0	38.2	0.36	30.5	109	164
TB2	MAR01671.002	Sediment	28.2	0.28	51.0	37.5	0.36	31.8	113	160
TB3	MAR01671.003	Sediment	27.1	0.31	50.9	40.1	0.39	31.8	112	171
ASP1	MAR01671.004	Sediment	25.1	0.22	49.2	38.7	0.37	30.5	105	171
ASP2	MAR01671.005	Sediment	26.8	0.19	49.3	38.3	0.37	30.8	111	164
ASP3	MAR01671.006	Sediment	28.3	0.20	47.0	36.2	0.36	30.7	110	157
ASP4	MAR01671.007	Sediment	25.6	0.17	42.5	31.8	0.33	26.4	91.9	138
ASP5	MAR01671.008	Sediment	27.7	0.20	45.9	36.0	0.36	28.9	104	154
ASP6	MAR01671.009	Sediment	20.4	0.32	53.8	43.1	0.41	32.2	87.4	153
SC1	MAR01671.010	Sediment	28.4	0.16	22.6	22.9	0.20	17.8	63.2	97.5
SC2	MAR01671.011	Sediment	30.0	0.18	31.6	28.3	0.27	22.3	79.5	120
SC3	MAR01671.012	Sediment	30.1	0.13	37.5	31.4	0.31	25.3	89.6	134
SC4	MAR01671.013	Sediment	28.0	0.11	39.4	32.0	0.34	26.0	98.2	141
SC5	MAR01671.014	Sediment	26.8	0.12	48.8	36.1	0.38	28.3	101	150
Certified Reference Material SETOC 774 (% Recovery)			99	101	104	106	104	105	102	100
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

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		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1	1	1
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	ACENAPTH	ACENAPHY	ANTHRACN	BAA	BAP	BBF	BENZGHIP	BEP
TB1	MAR01671.001	Sediment	170	89.1	194	542	471	547	584	399
TB2	MAR01671.002	Sediment	170	80.4	207	528	428	514	560	367
TB3	MAR01671.003	Sediment	205	87.4	294	714	569	647	685	462
ASP1	MAR01671.004	Sediment	206	101	247	724	590	695	785	486
ASP2	MAR01671.005	Sediment	651	116	216	666	547	655	729	460
ASP3	MAR01671.006	Sediment	182	97.3	218	571	474	568	660	404
ASP4	MAR01671.007	Sediment	181	90.6	217	560	452	535	647	383
ASP5	MAR01671.008	Sediment	208	121	252	728	582	685	765	485
ASP6	MAR01671.009	Sediment	254	120	246	581	464	538	601	379
SC1	MAR01671.010	Sediment	124	76	209	515	368	397	488	334
Certified Reference Material Quasimeme QPH109MS (% Recovery)			84	140	110	114	99	92	119	84
QC Blank			<1	<1	<1	<1	<1	<1	<1	<1

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

For full analyte name see method summaries.

\*See report notes

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		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1	1	1
		Accreditation	UKAS/MMO	MMO	MMO	MMO	MMO	MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BKF*	C1N	C1PHEN	C2N	C3N	CHRYSENE*	DBENZAH	FLUORANT
TB1	MAR01671.001	Sediment	496	2990	1370	2470	2150	665	112	989
TB2	MAR01671.002	Sediment	427	3060	1490	2450	2200	635	95.8	913
TB3	MAR01671.003	Sediment	547	3260	1600	2660	2230	806	139	1210
ASP1	MAR01671.004	Sediment	594	3330	1610	2780	2450	848	157	1180
ASP2	MAR01671.005	Sediment	549	3420	1700	2950	2530	756	150	1060
ASP3	MAR01671.006	Sediment	490	3170	1500	2680	2410	656	130	906
ASP4	MAR01671.007	Sediment	427	3240	1600	2620	2170	655	130	894
ASP5	MAR01671.008	Sediment	547	3850	1910	3060	2690	820	139	1210
ASP6	MAR01671.009	Sediment	440	2580	1340	2050	1620	651	121	988
SC1	MAR01671.010	Sediment	328	5130	2180	4020	3470	603	97	755
Certified Reference Material Quasimeme QPH109MS (% Recovery)			105	93	96	78	70	103	111	102
QC Blank			<1	<1	<1	<1	<1	<1	<1	<1

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

For full analyte name see method summaries.

\*See report notes

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference       Seaton Port - MMO Analysis

Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
<b>Method No</b>	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
<b>Limit of Detection</b>	1	1	1	1	1	1
<b>Accreditation</b>	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO	UKAS/MMO	UKAS/MMO

Client Reference:	SOCOTEC Ref:	Matrix	FLUORENE	INDPYR	NAPTH	PERYLENE	PHENANT	PYRENE
TB1	MAR01671.001	Sediment	269	452	1000	104	1270	875
TB2	MAR01671.002	Sediment	259	427	1040	92.1	1280	806
TB3	MAR01671.003	Sediment	311	536	1080	123	1500	1050
ASP1	MAR01671.004	Sediment	325	632	1060	129	1420	1010
ASP2	MAR01671.005	Sediment	465	586	1090	126	1410	951
ASP3	MAR01671.006	Sediment	289	501	1020	109	1270	806
ASP4	MAR01671.007	Sediment	284	484	1100	102	1320	802
ASP5	MAR01671.008	Sediment	330	594	1350	122	1540	1030
ASP6	MAR01671.009	Sediment	313	461	862	118	1150	933
SC1	MAR01671.010	Sediment	327	314	1650	71	1670	713
Certified Reference Material Quasimeme QPH109MS (% Recovery)			113	105	104	87	98~	101
QC Blank			<1	<1	<1	<1	<1	<1

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

For full analyte name see method summaries.

\*See report notes

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1	1	1
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	ACENAPTH	ACENAPHY	ANTHRACN	BAA	BAP	BBF	BENZGHIP	BEP
SC2	MAR01671.011	Sediment	179	143	242	735	505	608	658	427
SC3	MAR01671.012	Sediment	250	129	351	889	643	710	816	543
SC4	MAR01671.013	Sediment	193	120	249	649	476	618	609	404
SC5	MAR01671.014	Sediment	197	88.2	171	552	441	520	563	370
Certified Reference Material Quasimeme QPH109MS (% Recovery)			100	134	85	102	99	98	108	82
QC Blank			<1	<1	<1	<1	<1	<1	<1	<1

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

For full analyte name see method summaries.

\*See report notes

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID            MAR01671  
 Issue Version            1  
 Customer Reference        Seaton Port - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1	1	1
		Accreditation	UKAS/MMO	MMO	MMO	MMO	MMO	MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BKF*	C1N	C1PHEN	C2N	C3N	CHRYSENE*	DBENZAH	FLUORANT
SC2	MAR01671.011	Sediment	501	5650	2390	4540	3990	853	134	958
SC3	MAR01671.012	Sediment	580	5590	2580	4610	4300	999	170	1380
SC4	MAR01671.013	Sediment	429	4060	1840	3280	2870	757	129	992
SC5	MAR01671.014	Sediment	411	3130	1440	2590	2320	617	117	896
Certified Reference Material Quasimeme QPH109MS (% Recovery)			96	90	97	85	64	100	106	98
QC Blank			<1	<1	<1	<1	<1	<1	<1	<1

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

For full analyte name see method summaries.

\*See report notes

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	FLUORENE	INDPYR	NAPTH	PERYLENE	PHENANT	PYRENE
SC2	MAR01671.011	Sediment	383	465	1870	100	1780	900
SC3	MAR01671.012	Sediment	461	597	1840	135	2100	1200
SC4	MAR01671.013	Sediment	324	467	1300	100	1470	898
SC5	MAR01671.014	Sediment	297	444	1050	100	1290	804
Certified Reference Material Quasimeme QPH109MS (% Recovery)			111	108	104	79	98~	102
QC Blank			<1	<1	<1	<1	<1	<1

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

For full analyte name see method summaries.

\*See report notes

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID            MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		<b>Method No</b>	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		<b>Limit of Detection</b>	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		<b>Accreditation</b>	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
<b>Client Reference:</b>	<b>SOCOTEC Ref:</b>	<b>Matrix</b>	<b>PCB 101</b>	<b>PCB 105</b>	<b>PCB 110</b>	<b>PCB 118</b>	<b>PCB 128</b>	<b>PCB 138</b>	<b>PCB 141</b>
TB1	MAR01671.001	Sediment	0.00074	0.00027	0.00089	0.00090	0.00017	0.00089	0.00009
Certified Reference Material Quasimeme QOR151MS (% Recovery)			99	93	101	107	86	105	99
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference       Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		<b>Method No</b>	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		<b>Limit of Detection</b>	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		<b>Accreditation</b>	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
<b>Client Reference:</b>	<b>SOCOTEC Ref:</b>	<b>Matrix</b>	<b>PCB 149</b>	<b>PCB 151</b>	<b>PCB 153</b>	<b>PCB 156</b>	<b>PCB 158</b>	<b>PCB 170</b>	<b>PCB 18</b>
TB1	MAR01671.001	Sediment	0.00071	0.00021	0.00105	0.00009	0.00011	0.00022	0.00026
Certified Reference Material Quasimeme QOR151MS (% Recovery)			111	126	104	89	75	102	118
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.



# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		<b>Method No</b>	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		<b>Limit of Detection</b>	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		<b>Accreditation</b>	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
<b>Client Reference:</b>	<b>SOCOTEC Ref:</b>	<b>Matrix</b>	<b>PCB 180</b>	<b>PCB 183</b>	<b>PCB 187</b>	<b>PCB 194</b>	<b>PCB 28</b>	<b>PCB 31</b>	<b>PCB 44</b>
TB1	MAR01671.001	Sediment	0.00061	0.00014	0.00034	0.00015	0.00057	0.00047	0.00036
Certified Reference Material Quasimeme QOR151MS (% Recovery)			100	105	98	102	93	102	108
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		<b>Method No</b>	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		<b>Limit of Detection</b>	0.00008	0.00008	0.00008	0.00008
		<b>Accreditation</b>	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
<b>Client Reference:</b>	<b>SOCOTEC Ref:</b>	<b>Matrix</b>	<b>PCB 47</b>	<b>PCB 49</b>	<b>PCB 52</b>	<b>PCB 66</b>
TB1	MAR01671.001	Sediment	0.00015	0.00035	0.00055	0.00060
Certified Reference Material Quasimeme QOR151MS (% Recovery)			95	99	97	120~
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 101	PCB 105	PCB 110	PCB 118	PCB 128	PCB 138	PCB 141
TB2	MAR01671.002	Sediment	0.00067	0.00025	0.00086	0.00086	0.00016	0.00074	0.00008
TB3	MAR01671.003	Sediment	0.00071	0.00030	0.00077	0.00073	0.00016	0.00063	0.00011
ASP1	MAR01671.004	Sediment	0.00090	0.00035	0.00097	0.00103	0.00018	0.00092	0.00014
ASP2	MAR01671.005	Sediment	0.00072	0.00032	0.00075	0.00104	0.00024	0.00074	<0.00008
ASP3	MAR01671.006	Sediment	0.00067	0.00027	0.00078	0.00085	0.00018	0.00071	<0.00008
ASP4	MAR01671.007	Sediment	0.00107	0.00031	0.00115	0.00102	0.00016	0.00079	0.00011
ASP5	MAR01671.008	Sediment	0.00059	0.00023	0.00069	0.00074	0.00012	0.00053	<0.00008
ASP6	MAR01671.009	Sediment	0.00074	0.00027	0.00082	0.00085	0.00016	0.00092	0.00016
SC1	MAR01671.010	Sediment	0.00072	0.00024	0.00067	0.00089	0.00016	0.00062	0.00013
SC2	MAR01671.011	Sediment	0.00058	0.00019	0.00061	0.00055	0.00008	0.00059	<0.00008
Certified Reference Material Quasimeme QOR151MS (% Recovery)			103	89	104	111	99	97	108
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 149	PCB 151	PCB 153	PCB 156	PCB 158	PCB 170	PCB 18
TB2	MAR01671.002	Sediment	0.00070	0.00021	0.00088	0.00009	0.00017	0.00019	0.00025
TB3	MAR01671.003	Sediment	0.00065	0.00016	0.00090	0.00010	<0.00008	0.00018	0.00028
ASP1	MAR01671.004	Sediment	0.00073	0.00019	0.00095	0.00012	0.00011	0.00021	0.00027
ASP2	MAR01671.005	Sediment	0.00076	0.00027	0.00082	0.00010	0.00009	0.00013	0.00025
ASP3	MAR01671.006	Sediment	0.00066	0.00016	0.00075	<0.00008	<0.00008	0.00019	0.00023
ASP4	MAR01671.007	Sediment	0.00084	0.00021	0.00084	0.00009	0.00010	0.00021	0.00022
ASP5	MAR01671.008	Sediment	0.00054	0.00016	0.00061	<0.00008	0.00017	0.00017	0.00024
ASP6	MAR01671.009	Sediment	0.00067	0.00014	0.00083	<0.00008	0.00014	0.00014	0.00037
SC1	MAR01671.010	Sediment	0.00049	0.00011	0.00059	0.00009	0.00016	0.00013	0.00016
SC2	MAR01671.011	Sediment	0.00045	0.00014	0.00075	<0.00008	0.00009	0.00008	0.00021
Certified Reference Material Quasimeme QOR151MS (% Recovery)			110	117	96	94	83	95	114
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 180	PCB 183	PCB 187	PCB 194	PCB 28	PCB 31	PCB 44
TB2	MAR01671.002	Sediment	0.00050	0.00013	0.00030	0.00012	0.00055	0.00044	0.00038
TB3	MAR01671.003	Sediment	0.00044	0.00010	0.00031	0.00011	0.00060	0.00049	0.00037
ASP1	MAR01671.004	Sediment	0.00054	0.00012	0.00032	0.00014	0.00059	0.00048	0.00038
ASP2	MAR01671.005	Sediment	0.00063	0.00015	0.00038	0.00034	0.00055	0.00045	0.00030
ASP3	MAR01671.006	Sediment	0.00048	0.00009	0.00029	0.00016	0.00049	0.00045	0.00035
ASP4	MAR01671.007	Sediment	0.00046	0.00011	0.00036	0.00011	0.00052	0.00045	0.00048
ASP5	MAR01671.008	Sediment	0.00049	<0.00008	0.00028	0.00012	0.00051	0.00044	0.00032
ASP6	MAR01671.009	Sediment	0.00039	0.00016	0.00032	0.00014	0.00068	0.00063	0.00038
SC1	MAR01671.010	Sediment	0.00027	<0.00008	0.00011	<0.00008	0.00028	0.00029	0.00033
SC2	MAR01671.011	Sediment	0.00029	<0.00008	0.00022	<0.00008	0.00042	0.00035	0.00026
Certified Reference Material Quasimeme QOR151MS (% Recovery)			98	112	109	102	91	99	107
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 47	PCB 49	PCB 52	PCB 66
TB2	MAR01671.002	Sediment	0.00015	0.00034	0.00055	0.00050
TB3	MAR01671.003	Sediment	0.00018	0.00036	0.00053	0.00049
ASP1	MAR01671.004	Sediment	0.00011	0.00037	0.00058	0.00055
ASP2	MAR01671.005	Sediment	0.00011	0.00034	0.00057	0.00053
ASP3	MAR01671.006	Sediment	0.00012	0.00030	0.00047	0.00048
ASP4	MAR01671.007	Sediment	0.00012	0.00047	0.00076	0.00065
ASP5	MAR01671.008	Sediment	0.00010	0.00032	0.00047	0.00045
ASP6	MAR01671.009	Sediment	0.00015	0.00040	0.00058	0.00053
SC1	MAR01671.010	Sediment	<0.00008	0.00026	0.00044	0.00039
SC2	MAR01671.011	Sediment	0.00010	0.00023	0.00041	0.00035
Certified Reference Material Quasimeme QOR151MS (% Recovery)			91	96	104	115~
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

# Certificate of Analysis



Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference       Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 101	PCB 105	PCB 110	PCB 118	PCB 128	PCB 138	PCB 141
SC3	MAR01671.012	Sediment	0.00056	0.00018	0.00063	0.00067	<0.00008	0.00053	0.00009
SC4	MAR01671.013	Sediment	0.00063	0.00025	0.00075	0.00067	0.00020	0.00052	0.00016
SC5	MAR01671.014	Sediment	0.00073	0.00021	0.00075	0.00076	0.00016	0.00088	<0.00008
Certified Reference Material Quasimeme QOR151MS (% Recovery)			95	86	99	105	99	96	99
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

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Test Report ID           MAR01671  
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 Customer Reference      Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 149	PCB 151	PCB 153	PCB 156	PCB 158	PCB 170	PCB 18
SC3	MAR01671.012	Sediment	0.00067	0.00010	0.00085	<0.00008	<0.00008	0.00016	0.00021
SC4	MAR01671.013	Sediment	0.00057	0.00017	0.00101	<0.00008	0.00008	0.00015	0.00023
SC5	MAR01671.014	Sediment	0.00060	0.00018	0.00094	<0.00008	0.00013	0.00018	0.00023
Certified Reference Material Quasimeme QOR151MS (% Recovery)			102	103	89	92	77	97	109
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

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Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference       Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	PCB 180	PCB 183	PCB 187	PCB 194	PCB 28	PCB 31	PCB 44
SC3	MAR01671.012	Sediment	0.00047	0.00013	0.00029	0.00010	0.00042	0.00039	0.00028
SC4	MAR01671.013	Sediment	0.00052	0.00013	0.00032	0.00014	0.00048	0.00047	0.00030
SC5	MAR01671.014	Sediment	0.00046	<0.00008	0.00031	0.00012	0.00049	0.00041	0.00031
Certified Reference Material Quasimeme QOR151MS (% Recovery)			105	107	103	101	91	102	102
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

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Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		<b>Method No</b>	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		<b>Limit of Detection</b>	0.00008	0.00008	0.00008	0.00008
		<b>Accreditation</b>	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
<b>Client Reference:</b>	<b>SOCOTEC Ref:</b>	<b>Matrix</b>	<b>PCB 47</b>	<b>PCB 49</b>	<b>PCB 52</b>	<b>PCB 66</b>
SC3	MAR01671.012	Sediment	0.00009	0.00029	0.00041	0.00043
SC4	MAR01671.013	Sediment	0.00009	0.00032	0.00048	0.00047
SC5	MAR01671.014	Sediment	0.00018	0.00033	0.00049	0.00048
Certified Reference Material Quasimeme QOR151MS (% Recovery)			91	109	102	116~
QC Blank			<0.00008	<0.00008	<0.00008	<0.00008

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are available.

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Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference       Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BDE17	BDE28	BDE47	BDE66	BDE85	BDE99	BDE100	BDE138
TB1	MAR01671.001	Sediment	0.00023	0.00018	0.00195	0.00052	0.00014	0.00201	0.00056	0.00008
TB2	MAR01671.002	Sediment	0.00022	0.00017	0.00163	0.00028	<0.00005	0.00120	0.00036	<0.00005
TB3	MAR01671.003	Sediment	0.00028	0.00018	0.00177	0.00025	0.00006	0.00134	0.00036	<0.00005
ASP1	MAR01671.004	Sediment	0.00031	0.00022	0.00206	0.00019	0.00007	0.00147	0.00039	<0.00005
ASP2	MAR01671.005	Sediment	0.00040	0.00035	0.00223	0.00060	0.00021	0.00158	0.00052	0.00016
ASP3	MAR01671.006	Sediment	0.00031	0.00021	0.00156	0.00012	0.00008	0.00121	0.00035	<0.00005
ASP4	MAR01671.007	Sediment	0.00020	0.00013	0.00144	0.00008	0.00006	0.00123	0.00027	0.00005
Certified Reference Material QBC068MS (% Recovery)			111~	92~	101	96~	55~	94	104	50~
QC Blank			<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005

\* See Report Notes

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Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference      Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.00005	0.00005	0.00005	0.0001
		Accreditation	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BDE153	BDE154	BDE183	BDE209
TB1	MAR01671.001	Sediment	0.00060	0.00034	0.00036	0.0694
TB2	MAR01671.002	Sediment	0.00032	0.00026	0.00034	0.0570
TB3	MAR01671.003	Sediment	0.00035	0.00029	0.00048	0.0935
ASP1	MAR01671.004	Sediment	0.00036	0.00028	0.00050	0.0769
ASP2	MAR01671.005	Sediment	0.00055	0.00045	0.00052	0.0594
ASP3	MAR01671.006	Sediment	0.00030	0.00027	0.00036	0.0458
ASP4	MAR01671.007	Sediment	0.00028	0.00022	0.00039	0.0894
Certified Reference Material QBC068MS (% Recovery)			95	124	81	82
QC Blank			<0.00005	<0.00005	<0.00005	<0.00018*

\* See Report Notes

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Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference       Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
		Accreditation	MMO*	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BDE17	BDE28	BDE47	BDE66	BDE85	BDE99	BDE100	BDE138
ASP5	MAR01671.008	Sediment	0.00038	0.00032	0.00213	0.00048	0.00022	0.00250	0.00085	0.00021
ASP6	MAR01671.009	Sediment	0.00256	0.00085	0.00960	0.00127	0.00020	0.00433	0.00153	0.00015
SC1	MAR01671.010	Sediment	0.00011	0.00007	0.00076	0.00013	<0.00005	0.00054	0.00013	<0.00005
SC2	MAR01671.011	Sediment	0.00015	0.00010	0.00123	0.00018	0.00007	0.00111	0.00031	<0.00005
SC3	MAR01671.012	Sediment	0.00017	0.00011	0.00140	0.00019	<0.00005	0.00110	0.00030	0.00008
SC4	MAR01671.013	Sediment	0.00021	0.00014	0.00158	0.00022	0.00007	0.00151	0.00041	<0.00005
SC5	MAR01671.014	Sediment	0.00026	0.00016	0.00162	0.00024	<0.00005	0.00115	0.00032	<0.00005
Certified Reference Material QBC068MS (% Recovery)			136~	106~	107	108~	107	94	107	113~
QC Blank			<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005

\* See Report Notes

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Test Report ID           MAR01671  
 Issue Version            1  
 Customer Reference       Seaton Port - MMO Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.00005	0.00005	0.00005	0.0001
		Accreditation	UKAS/MMO	MMO*	UKAS/MMO	UKAS/MMO
Client Reference:	SOCOTEC Ref:	Matrix	BDE153	BDE154	BDE183	BDE209
ASP5	MAR01671.008	Sediment	0.00071	0.00070	0.00052	0.0427
ASP6	MAR01671.009	Sediment	0.00148	0.00152	0.00451	0.0325
SC1	MAR01671.010	Sediment	0.00011	0.00017	0.00015	0.0205
SC2	MAR01671.011	Sediment	0.00023	0.00019	0.00023	0.0618
SC3	MAR01671.012	Sediment	0.00143	0.00042	0.00507	0.0736
SC4	MAR01671.013	Sediment	0.00052	0.00034	0.00040	0.0560
SC5	MAR01671.014	Sediment	0.00032	0.00024	0.00051	0.0581
Certified Reference Material QBC068MS (% Recovery)			94	131~	106	88
QC Blank			<0.00005	<0.00005	<0.00005	<0.00014*

\* See Report Notes

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Test Report ID        MAR01671  
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## REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
*SUB_01	MAR01671.001-014	Analysis was conducted by an approved subcontracted laboratory.
ICPMSS*	MAR01671.001-014	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ASC/SOP/301	MAR01671.001-014	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR01671.001-014	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR01671.001-014	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved in the PAHSED UKAS accredited method. Chrysene and Triphenylene are resolved for MMO but this is currently not UKAS accredited therefore Chrysene is reported without this accreditation.
ASC/SOP/308	MAR01671.001-014	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.
ASC/SOP/308	MAR01671.008-014	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (BDE17, BDE154) . These circumstances should be taken into consideration when utilising the data.

## DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

# Certificate of Analysis



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Test Report ID                   MAR01671  
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Method	Sample and Fraction Size	Method Summary
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Metals	Air dried	Aqua-regia extraction followed by ICP analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and sieved to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and sieved to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions					
Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorocyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorocyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorocyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	PPDDE	p,p'-Dichlorodiphenyldichloroethylene
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	PPDDT	p,p'-Dichlorodiphenyltrichloroethane
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	PPTDE	p,p'-Dichlorodiphenyldichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		